DOCUMENT RESUME

ED 305 122 JC 890 154

AUTHOR Davis, Dwight
TITLE The Economic Impact of Miami-Dade Community College on Dade County. Research Report No. 86-12.
INSTITUTION Miami-Dade Community Coll., Fla. Office of Institutional Research.
PUB DATE Mar 86
NOTE 13p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Community Benefits; Community Colleges; Economic Climate; *Educational Economics; Educational Finance; *Expenditures; *Financial Support; Property Taxes; Salaries; *School Business Relationship; *School Community Relationship; Two Year Colleges
IDENTIFIERS *Economic Impact; Economic Impact Studies; Economic Influences; *Florida (Dade County)

ABSTRACT

A study was conducted to investigate the economic effects of external funds flowing into Dade County because of the existence of Miami-Dade Community College (MDCC). After establishing that most of MDCC's funding comes from external sources and that 85% of its 8,000 employees reside in Dade County, the study sought answers to questions pertaining to the volume of business, jobs, and income generated by funds coming into Dade County through the college. Study findings included the following: (1) about $70,000,000 of MDCC's funding, or two of every three dollars the college spent, originated from sources external to Dade County; (2) MDCC paid $66,000,000 in gross salaries, or $50,000,000 in take-home, disposable income to its employees, resulting in $43,000,000 worth of purchasing power for Dade County residents; (3) about $27,000,000 was spent by MDCC employees residing in Dade County on non-housing items, with an additional $13,000,000 spent on housing; (4) MDCC spent about $6,000,000 on purchases from Dade County firms; (5) college-related, in-county expenditures totaled about $46,000,000; (6) almost 10,000 jobs were created by college-related, in-county expenditures; (7) college-related, local expenditures generated almost $73,000,000 worth of sales; (8) local businesses spent about $7,000,000 in support of their college-related business volume; (9) about $25,000,000 in personal income accrued to local individuals as a result of college-related local expenditures; and (10) local businesses paid about $240,000 in real estate taxes to the Dade County government for real property allocable to MDCC. (AAC)

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THE ECONOMIC IMPACT OF MIAMI-DADE COMMUNITY COLLEGE ON DADE COUNTY

Research Report No. 86-12

March 1986

Dwight Davis

Research Associate, Sr.

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John Losak, Dean

JC 890 154

The Economic Impact of
Miami-Dade Community College
on Dade County

Introduction

This report is the second and final phase of research attempting to estimate the economic effects of external funds flowing into Dade County because of the existence of Miami-Dade Community College. The first phase described the estimated impact of Miami-Dade Community College on "human capital" development in Dade County (R.R. 85-36). Using the increment in earnings associated with one to three years of higher education as an indicator of the increased productivity of workers, the first study estimated the annual dollar value of the increase in productivity of Dade County residents attributable to Miami-Dade Community College to be about $60,000,000. The $60,000,000 increase in productivity annually generates about $26,000,000 worth of new retail sales and about 2,000 new jobs.

As did the aforementioned human capital development report, this report will rely heavily on the impact study models designed by Caffrey and Isaacs (1971) and Littlefield (1982). College-related expenditures pertain to the 1984/85 fiscal year. And of course Dade County, a burgeoning megalopolis of nearly 2,000,000 residents is the target community.

Funding Source and Residency of Staff

Two very important considerations in assessing the economic impact of a college are the origins of its revenues and the addresses of its employees. For a college to exert its maximum impact, funding should flow into the college largely from sources outside the community while its employees should reside mostly within the community. According to Littlefield:

> The immediate consequence of new money flowing into the local economy is the employment of resources by the college. The money flow to consuming units increases (i.e., their incomes increase). As a consequence of increased incomes, the consuming units purchase more of the goods and services created by non-college producing

> units. The creation of additional goods and services requires the employment of more resources. This in turn leads to a second round of higher incomes...until there has been a multiple increase in income and sales. P.17.

This report assumes that because Miami-Dade Community College is preponderantly state funded and because most of its employees reside in Dade County, the College is essentially a conduit through which new money flows into Dade County. The questions that follow deal primarily with the retail sales, jobs, and businesses supported by the increase in personal income from money flowing into the County via Miami-Dade Community College.

Questions

1. What amount of Miami-Dade Community College funding originates from sources external to Dade County?

According to the College Business Office, Miami-Dade receives almost $80,000,000 of funding from sources external to Dade County. About $62,000,000 of external funding comes from the State. Strictly speaking, this $62,000,000 is not all new money. Some of it is tax money paid to the State by Dade County residents. The Florida Statistical Abstract (1985) reports that about 15% of all tax revenues collected by the State emanate from Dade County residents. That being the case, about $9,000,000 of State funding is "old" money while about $53,000,000 represents "new" money. Nevertheless, one can estimate that because of the existence of Miami-Dade Community College, Dade County is annually infused with some $70,000,000 ($80,000,000 "less old money") of new money. This sum accounts for about two out of every three dollars the College spends.

2. What proportion of Miami-Dade Community College employees reside within Dade County?

According to the College Payroll Office, Miami-Dade Community College processes about 8,000 W-2 forms in a calendar year. Of this number about 2,200 are full-time employees, 2,600 are part-time employees and the rest are student workers. Data from the College Personnel Office show that at least 85% of College employees reside within Dade County. As most of the employees live within the County and most of the funding comes from external

sources, conditions appear ripe for Miami-Dade to exert a highly positive economic impact upon its Dade County community.

3. What is the dollar amount of salaries Miami-Dade pays to its employees?

This is a key question because salaries are the College's major expenditure and therefore the most significant means through which income derived from new money reaches the hands of County residents so that it can be spent, thereby increasing retail sales and creating jobs.

The College Payroll Office reports that Miami-Dade annually pays out almost $66,000,000 in gross salaries. The Payroll Office estimates that the net or take-home pay is about $50,000,000. In other words the College places about $50,000,000 worth of disposable income into the hands of its employees, and since 85% of its employees live within Dade County, the College annually puts an estimated $43,000,000 worth of purchasing power under the control of some 6,800 Dade County residents.

4. How much was spent on non-housing items by College employees residing in Dade County?

Caffrey and Isaacs (1971) estimate that a college staff spends about .63 of its disposable income on non-housing items. Moreover, this study will assume as did Littlefield (1982) that County residents make all their retail purchases within Dade County, while non-county residents make no purchases within Dade County. Obviously this is not the case. But the underlying supposition is that purchases that non-residents make inside Dade County counterbalance the purchases which local residents make outside Dade County. Nonetheless, assuming that Miami-Dade employees spend about .63 of their income for non-housing items on average, and that they make these expenditures within Dade County, the Miami-Dade employees residing in Dade County spend over $27,000,000 in-county on non-housing items.

5. How much was spent for housing by Miami-Dade employees residing in Dade County?

Following the Caffrey and Isaacs (1971) estimate that about 30% of disposable income is spent on housing costs (rents, mortgages, utilities),

Miami-Dade employees spend approximately $13,000,000 in-county for housing expenses.

Adding housing and non-housing expenditures, Miami-Dade employees spend about $40,000,000 in Dade County.

6. How much did the College itself spend on purchases from Dade County firms?

During the 1984/85 fiscal year, the Purchasing Office at Miami-Dade Community College spent about $12,000,000. As there is no readily available means of determining exactly what amount went to Dade County firms, this study will estimate that at least 50% of College expenditures go to Dade County firms. If this is the case, the College Purchasing Office spends at least $6,000,000 annually in Dade County.

7. What are the total college-related in-county expenditures?

The total annual college-related, in-county expenditures are the sum of employee in-county expenditures ($40,000,000) and College in-county expenditures ($6,000,000) which is approximately $46,000,000.

8. How many local jobs are created by college-related, in-county expenditures?

The number of jobs created by Miami-Dade Community College expenditures is the sum of all College employees and the jobs created in the local Dade County economy by virtue of College purchases. To estimate the number of jobs created by College purchases in-county, Caffrey and Isaacs (1981) use a coefficient of .00007 which represents the number of jobs per dollar of expenditure. The $46,000,000 worth of Dade County purchases by Miami-Dade would then create 3,220 new jobs. Adding these 3,220 new jobs to the 6,800 College employees, it is estimated that almost 10,000 jobs can be traced directly to Miami-Dade in-county expenditures.

From the first phase of the economic impact study, which looked at the College's impact on human capital development in the County (R.R. 85-36), it was estimated that by increasing the productivity and hence incomes of its students, the College annually generated about 2,000 new

jobs. Adding this figure to the aforementioned 10,000 jobs, one sees that Miami-Dade Community College is either directly or indirectly responsible for employing nearly 12,000 people and for creating about 5,000 new jobs every year.

9. What impact does the amount of college-related local expenditures exert on local business volume?

The question essentially asks how much local, additional business volume is stimulated by the increased demand for local products instigated by college-related expenditures. As the College and its employees spend money in the community, the local businesses receiving this money pay out some portion of this money to local residents in the form of wages, salaries or profits. The local people receiving these payments then respend this money and the cycle is perpetuated--spending, receiving, respending etc..... Caffrey and Isaacs (1971) suggest a coefficient ranging from .60 to .80 representing the proportion of the income, received by local businesses from college-related expenditures, that is respent. This study will use .60 as the coefficient representing the degree to which individual income received from local business activity is spent and respent locally.

Using $46,000,000 as an estimate of college-related local expenditures (or conversely, local business receipts), local business volume stimulated by college-related local expenditures is approximately .60 X $46,000,000 or $27,600,000. Total college-related business volume would be the $46,000,000 of initial expenditures plus the $27,000,000 of "second round" expenditures which would approximate $73,600,000 worth of sales.

10. How much do local businesses spend in support of their college-related business volume?

The answer to this question will be an estimate of the volume of purchases made by local businesses from local businesses in order to meet the demand created by college-related local expenditures. Caffrey and Isaacs (1971) suggest the use of a coefficient ranging between .15 to .30 to represent the proportion of receipts due to college-related purchases that are used by local businesses to purchase goods and services from other local

sources. Again, preferring to err on the conservative side, this study will use the lower end of the coefficient range.

Taking $46,000,000 as an estimate of college-related local expenditures, local purchases by local businesses in support of their college-related business volume would amount to .15 X $46,000,000 or $6,900,000.

Adding together the initial and secondary impacts of local college-related spending on local business volume (46,000,000 + $27,600,000 + $6,900,000), it is estimated that college-related local purchases eventually instigate about $80,500,000 worth of local sales annually within Dade County.

The estimate of $80,500,000 refers to local sales generated by college-related local expenditures only. Recall from the "human capital" phase of this impact study that by annually increasing the dollar value of the productivity of Dade County residents by some $60,000,000, Miami-Dade annually generates about $26,000,000 worth of additional sales. So when one jointly considers both "spending generated" and "productivity generated" increases in local business volume attributable to Miami-Dade Community College, one estimates about a $106,500,000 annual impact on local business volume.

11. How much personal income accrues to local individuals as a result of college-related local expenditures?

To answer this question one needs to estimate how much money local residents receive in wages, salaries or profits from the average dollar spent by local households in the community. A coefficient range of .50 to .66 suggested by Caffrey and Isaacs (1971) indicates that a dollar spent in the community by local residents will generate, on average, between 50 and 66 cents of local income.

It was estiamted the College directly spends about $46,000,000 annually within Dade County. Keeping towards the lower end of Caffrey and Isaacs' range for income per expenditure, .55 will be the coefficient used

to estimate the income accruing to local individuals per dollar of local expenditure. One, therefore, estimates that about $25,300,000 of personal income (.55 X $46,000,000) accrues to local individuals as a direct result of college-related spending.

12. What is the value of local business inventory committed to college-related business?

Total college-related business volume was estimated at around $73,600,00. Using the Caffrey and Isaacs (1971) inventory to business volume coefficient of .12 and multiplying by $73,600,000, the estimated value of local inventory related to business activity generated by the presence of the College is $8,832,000.

13. What is the value of local business real property committed to college-related retail business?

While the previous question tried to determine portion of local inventory supporting College purchases, this question estimates the value of local retail property apportioned to local college-related business. To obtain an answer, the strategy is to determine the College's proportion of local retail volume and to multiply that fraction by the assessed valuation of local retail, real property, yielding that portion of local retail property related to College business. This study assumes that most college-related, local business involves the retail purchase of goods and services. Caffrey and Isaacs (1971) estimate that about .63 of every dollar spent goes for non-housing items. Therefore, about $46,370,000 or .63 of the $73,600,000 of local college-related business volume involves non-housing retail sales. According to the Florida Statistical Abstract (1985), approximately 9½ billion dollars worth of retail sales were transacted in Dade County in 1982. College-related retail volume would then account for about .005 of total retail sales. The Dade County Tax Appraiser's Office cites the assessed retail property in Dade County at about 2½ billion dollars. Using .005 as the coefficient of Miami-Dade's apportionment, the assessed value of local retail property committed to college-related retail business is approximately 12 million dollars.

14. What amount of real estate taxes are paid to the Dade County government by local businesses for real property allocable to college-related business?

The answer to the previous question estimated that about $12,000,000 of local business real property is allocable to college-related business. The Dade County Tax Appraiser's Office reported that commercial property in Dade County is taxed at a rate of 19.958 per $1,000 of assessed value. Therefore, the taxes paid by local businesses on the estimated $12,000,000 of real property allocable to college-related business would amount to about $240,000.

Summary and Conclusions

First establishing that most of Miami-Dade's funding comes from external sources and that most of its employees reside in Dade County, the report sought answers to questions pertaining to the amount of sales, jobs and incomes generated by funds flowing into Dade County through Community College. For brief recapitulation, the questions and their answers were as follows:

1. What amount of Miami-Dade Community College funding originates from sources external to Dade County?--about $70,000,000 or two out of every three dollars the College spends.

2. What proportion of Miami-Dade employees reside in Dade County?--85% of the 8,000 persons employed reside in Dade County.

3. What is the dollar amount of salaries Miami-Dade pays to its employees?--$66,000,000 in gross salaries; $50,000,000 in take-home, disposable income resulting in $43,000,000 worth of purchasing power under the control of Dade County residents.

4. How much was spent on non-housing items by College employees residing in Dade County?--about $27,000,000.

5. How much was spent for housing by Miami-Dade employees residing in Dade County?--about $13,000,000.

6. How much did the College spend on purchases from Dade County firms?--about $6,000,000.

7. What are the total college-related, in-county expenditures?--about $46,000,000.

8. How many local jobs are created by college-related, in-county expenditures?--almost 10,000.

9. What impact does the amount of college-related local expenditures exert on local business volume?--generates about $73,000,000 worth of sales.

10. How much do local businesses spend in support of their college-related business volume?--about $7,000,000.

11. How much personal income accrues to local individuals as a result of college-related, local expenditures?--about $25,000,000.

12. What is the value of local business inventory committed to college-related business?--about $9,000,000.

13. What is the value of local business real property committed to college-related retail business?--about $12,000,000.

14. What amount of real estate taxes are paid to the Dade County government by local businesses for real property allocable to Miami-Dade Community College?--about $240,000.

These questions with estimated answers represent an attempt to make an informed assessment of the magnitude of the economic ripples and waves made by Miami-Dade's splash of in-county spending with out-of-county funds. This assessment can best be described as somewhat conservative because in all cases the study used the low end of the range of coefficients

driving the creation of income, sales and jobs. The lower end of the coefficient range is ideally meant for use by colleges located in smaller, economic communities (Caffrey & Isaacs, 1971), not a large, expanding economic community such as Dade County. It would therefore be appropriate to preface all estimated figures with the modifier "at least," as the estimates are in no sense exaggerations.

For the sake of a more complete analysis, the study was to have included an estimate of the property taxes forgone by Dade County due to the College's tax exempt status. But the County Tax Appraiser's office did not presently have personnel available for researching this information. One can only surmise that the sum of property taxes forgone by the County would pale as insignificant beside the overwhelming positive impact of the College in terms of the jobs, incomes and business volume it generates.

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